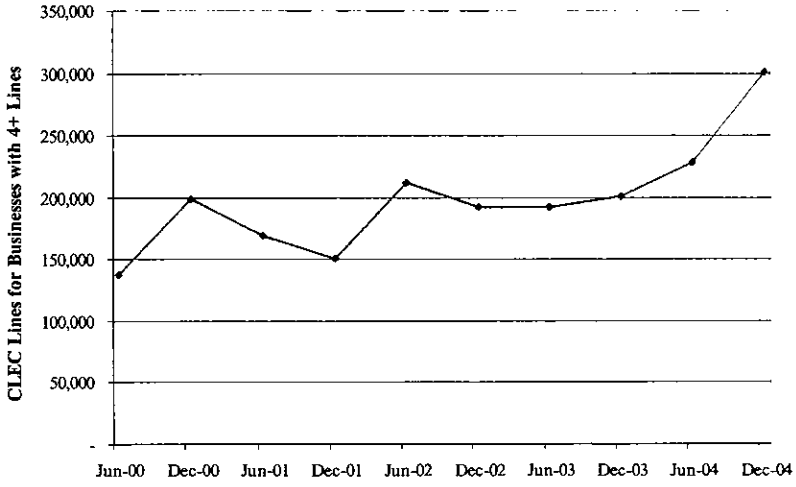
Q. WHAT IS THE SIGNIFICANCE OF THE GROWTH IN CLEC BUSINESS ACCESS LINES?

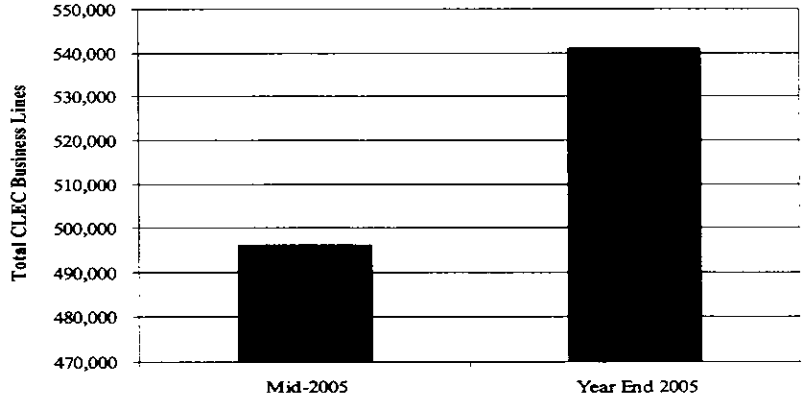
A. As Dr. Taylor explains in greater detail, recent growth in competitive line counts proves that entry barriers have been eliminated, and that competitors are able to thrive in the Virginia enterprise market. As shown in Figure 19 below, the number of competitor business lines grew substantially from June 2000 to December 2005.

FIGURE 19

CLEC BUSINESS LINE GROWTH



Source: Federal Communications Commission Reports, Local Telephone Competition: Status as of June 30, 2000 through December 31, 2004.



Source: Federal Communications Commission Reports, Local Telephone Competition: Status as of June 30, 2005 and December 31, 2005

Q. PLEASE PROVIDE A PROFILE OF THE CLECS SERVING ENTERPRISE CUSTOMERS IN VIRGINIA.

A. Among the CLECs serving enterprise customers in Virginia are:

- **at&t** owns and operates a worldwide IP networking infrastructure of hardware, software and personnel that provide businesses with a transparent standardized solution to enable their global market strategies. at&t's networking solutions allow any business, anywhere in the world, to leverage at&t's global IP network and unleash the productivity of their IP applications, as well as better control and manage their own networks. at&t's voice products include a variety of integrated service products targeted at enterprise customers, including basic local exchange service, throughout the U.S. Its data products include high speed connections - such as private lines, packet, dedicated internet and enterprise networking services - as well as products such as DSL/broadband, dial-up internet access and Wi-Fi (local radio frequency commonly known as wireless fidelity). at&t also provides businesses voice applications over IP-based networks (*i.e.*, Enhanced Virtual Private Networks or "EVPN"). Over the past several years, at&t has built out its new multi protocol label switching/asynchronous transfer mode, or MPLS/ATM network, to supplement, and eventually replace, its other extensive global data networks. These products enable at&t to provide highly complex global data networks.

Recently, at&t announced a global strategic alliance with Avaya, a leading provider of business communications applications, to accelerate business VoIP migration. According to an at&t press release:

> The alliance leverages AT&T's industry-leading global IP network, network design and management and Avaya's enterprise IP communications technology to deliver end-to-end managed solutions from the wide area network to the IP phone on the desktop. The solutions provide comprehensive migration to IP telephony to the associated local area network (LAN) and wireless LAN infrastructure.[326]

at&t operates 27 service nodes in the following Virginia locations: Arlington, Berea, Bluemont, Blacksburg, Blairs, Charlottesville, Culpeper, Dahlgren, Dranesville, Edinburg, Hampton, Harrisonburg, Herndon, Independent Hill, Lightfoot, Leesburg, Lexington, Moseley, Norfolk, Newport News, Oakton, Richmond, Rocky Mount, Roanoke, Winchester, Waynesboro and Wytheville.[327]

at&t has deployed at least 60 miles of fiber in Virginia and has 113 on-net buildings in the Commonwealth.[328] Examples of at&t's recent activity serving enterprise customers located in Virginia include the following:

- In June 2006, AT&T extended and expanded its relationship with Marriott International to provide a comprehensive range of innovative network services to support the company's nearly 2,800 locations worldwide. AT&T's services will include global voice, teleconferencing, calling card, data, and network and

[326] *See* http://www.sbc.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=22053 (accessed June 28, 2006).

[327] *See AT&T Global Network Map*, available at http://www.corp.att.com/globalnetworking .

[328] GeoTel MetroFiber Database, Georesults GeoLit™ Report.

managed Internet solutions. Marriott has over 100 locations in Virginia;[329]

- In May 2006, AT&T announced a $10 million global networking contract over three years from Tenneco Inc., one of the world's largest designers, manufacturers and marketers of emission control and ride control products and systems for the automotive original equipment market and the aftermarket. AT&T will deploy an IP VPN, integrating 113 Tenneco locations across North America, Latin America, Europe and Asia-Pacific with a full range of voice, data and business continuity services. In Virginia, Tenneco has manufacturing centers in Harrisonburg and Virginia Beach;[330]

- In December 2005, AT&T announced a three-year networking contract from Chipotle Mexican Grill Inc., a national chain of quick-service restaurants specializing in gourmet burritos and tacos. AT&T will provide Chipotle with a custom networking solution that integrates more than 450 restaurants across 20 states. Chipotle will use the AT&T comprehensive networking solution to facilitate point-of-sale transactions, enhance customer service, reduce business costs and raise brand loyalty. AT&T also provides Chipotle with local and long distance voice services for its regional offices nationwide. Chipotle has 18 locations in Virginia ;[331] and

- In October 2005, FEMA awarded AT&T a four-year $8.9 million contract to manage its Mount Weather Emergency Operations Center located in northern Virginia. AT&T has been involved in the design, installation and operation of the National Network Operations Center for the past 16 years. AT&T will perform a range of duties, including program management, local area and wide area network configuration, video conferencing set up, satellite

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[329] *See* AT&T Press Release, *AT&T Extends Relationship with Marriott International*, June 8, 2006 and Marriott Hotels, *Find & Reserve*, available at https://marriott.com/search/cwsearch.mi.

[330] *See* AT&T Press Release, *AT&T Wins New Global Networking Contract from Tenneco*, May 17, 2006 and Tenneco Overview, *Our Locations*, available at http://www.tenneco.com/overview/location.html.

[331] *See* AT&T Press Release, *AT&T Serves Up Spicy Networking Solutions For Chipotle Mexican Grill*, December 19, 2005 and Chipotle, *Find*, available at http://www.chipotle.com.

communications, set up call centers, install PBX systems and provide help desk services.[332]

- **Cavalier** offers "businesses of every size" a host of "Voice Solutions" (including basic local, flat rate local, and unlimited local and long distance packages, as well as integrated voice and data services, T-1s, and Fibertex service), "Data Solutions" (including dedicated Internet access, CavDirect Connect private line services, Frame Relay, CavVelocity DSL, 56k Internet dial-up, dark fiber, CavShare Web hosting, and Domain Name Hosting), and "Conference Solutions" (including Conference bridges, and web meetings).[333] Cavalier also offers various "VoIP for Business" services. The enterprise customers named in the "partial list" of customers served by Cavalier include Ashoka (based in Arlington), Beach Industries, Inc. (based in Richmond), Richmond Children's Hospital, City of Newport News, Newport News School District, Salisbury Chamber of Commerce, VA Department of Information Technology and other, national businesses with locations in Virginia such as American Red Cross, Papa John's Pizza, State Farm Insurance Company, and Phillip Morris U.S.A.[334] Cavalier has deployed 760 miles of fiber in Virginia. With the merger of Cavalier and Talk America having closed in December, Brad Evans, the current CEO of Cavalier commented, "Talk's state-of-the-art back office support system, their extensive sales and

[332] *See* Newsbytes News Network, *FEMA selects AT&TAT&T unit for operations center work*, October 27, 2005.

[333] *See* http://www.cavtel.com/business/index.shtml (accessed June 20, 2006).

marketing distribution channels and Cavalier's advanced network architecture will help provide our combined customers the newest and most advanced telecommunications' solutions in the marketplace."[335]

- **NTELOS** has a wireline business that is divided into two operations, a Rural Local Exchange Carrier ("RLEC") and a Competitive Wireline business consisting of CLEC network and Internet operations. As an RLEC, NTELOS owns and operates two incumbent local telephone companies and serves three rural Virginia regions. As a CLEC, it provides service to 16 areas in Virginia and West Virginia, focusing almost entirely on commercial and institutional customers. Additionally, NTELOS offers leading-edge data transport services and broadband internet access across the region. NTELOS' wireline business is supported by an extensive 1,900-mile fiber optic network that is used to back-haul communications traffic for its own retail services and to provide wholesale transport services to other telecommunications carriers for their long distance, internet, wireless and private network services.[336] NTELOS' ability to deliver a broad range of communications services over infrastructure that it controls and maintains has been an important driver of its success. It focuses on high-margin customers, including

[334] *See* http://www.cavtel.com/business/testimonials.shtml (accessed June 20, 2006).

[335] *See* Cavalier Press Release, "*Talk America to Be Acquired by Cavalier Telephone & TV*," released September 22, 2006.

[336] SEC, Form 10-K, NTELOS Holding Corp., December 31, 2005, p. 9.

educational institutions such as colleges and universities, health care providers and governmental entities. It has been growing the wireline business by developing and introducing new IP-enabled products, including integrated voice/data access technology and metro Ethernet, increasing the penetration of value-added bundled voice and data services and enhancing the availability of broadband connectivity. NTELOS believes these initiatives have provided it with an enhanced competitive position in its wireline regions.[337] Its voice offerings include voice service, Centrex, Primary Rate ISDN Services, Long Distance Service and Customer Calling Services. Its Internet access and data offerings include High-Speed DSL Access, Portable Broadband Access, Dedicated Internet Access, Web Hosting, Local Dial-up Internet Access, Integrated Access, Metro Ethernet, Frame Relay/ATM and Hi-cap Private Line Service.

NTELOS service areas in Virginia currently include Charlottesville, Danville, Harrisonburg, Lexington, Lynchburg, Martinsville, New River Valley (Blacksburg, Christiansburg, Radford), the Roanoke Valley (Roanoke, Salem), Staunton, Winchester and Wytheville.

- **TelCove** is a leading provider of business critical telecommunications services to enterprise companies and carriers. It builds, develops, and operates its own fiber optic network and possesses a wealth of local and long haul fiber that reliably transports Internet, data, and voice

[337] *See* NTELOS web site at: http://ir.ntelos.com/index.cfm?pagesect=more (accessed October).

communications. Nationally, TelCove has over 22,000 route miles of local and long-haul fiber, direct connectivity to almost 4,000 on-net buildings and access to thousands more; its network has a footprint that reaches 70 markets across the United States, including Virginia.[338] TelCove's voice offerings include: Business Lines; Business Trunks; ISDN BRI; ISDN PRI; Centrex; Voice Messaging; Auto Attendant; Switched Long Distance; and Dedicated Long Distance. Its data offerings include: IP Backbone; Ethernet (Metro and Intercity); OC-192 and 10G Wavelengths; Storage Networking Solutions; Local Private Line; Private Local SONET Ring; Intercity Private Line; Frame Relay; ATM; Co-location; Business Continuity/Disaster Recovery; E-Vaulting; Remote Shared Storage; and Storage Protocol Support. TelCove's Internet offerings include: Dedicated Internet; Remote Access VPN; CPE-Based IP VPN; Network-Based IP VPN; Voice-over-IP (VoIP); TelCove Network VoIP Service (TNVS); TelCove Managed IP PBX (MIPBX); Commercial Web Hosting and E-Commerce; and E-Billing. TelCove's interconnected and fully redundant SONET-based network consists of over 22,000 route miles of local and long haul fiber.

TelCove currently serves the following areas in Virginia: Charlottesville, Danville, Fredericksburg, Harrisonburg, Lynchburg, Norfolk, Richmond, Roanoke, Staunton, Washington DC and Winchester. It has deployed 825 route miles of fiber in Verizon's Virginia service area. TelCove is

[338] *See TelCove Network Maps*, available at http://www.telcove.com/network/network-maps.asp.

engaged in broadband initiatives with: Mid-Atlantic Broadband Cooperative, an organization tasked with building an advanced, open-access fiber optic network throughout Southside Virginia; and Brainstorm Technologies, a Wi-Fi provider based in Winchester that offers a wide range of Internet options, from dial-up to T-1. As of September 2005, Brainstorm had about 40 major customers – including Amherst Family Practice, Virginia Storage Services, Winchester Orthopedics, Partlow Insurance and Perry Engineering – and it continues to grow, having recently acquired its first residential customers in an Apple Pie Ridge subdivision in northern Frederick County.[339]

- **US LEC** is a leading provider of IP, data and voice solutions to business customers and enterprise organizations throughout the Eastern United States. It offers advanced, IP-based, data and voice services such as MPLS VPN and Ethernet, as well as comprehensive Dynamic T^{SMS} VoIP-enabled services and features. It also offers local and long distance services and data services such as Frame Relay, Multi-Link Frame Relay and ATM. US LEC provides a broad array of complementary services, including conferencing, data backup and recovery, data center services and Web hosting, as well as managed firewall and router services for advanced data networking. US LEC also offers selected voice services in 27 additional states and provides enhanced data services, selected

[339] North Valley Business Journal, "*Brainstorm Technologies Thinks Big With Wi-Fi,*" September 1, 2005.

Internet services and MegaPOP® (local dial-up Internet access for ISPs) nationwide.

US LEC provides IP, data and voice services to more than 27,000 mid-to-large-sized businesses and enterprise organizations in most of the major business markets in 16 eastern states plus the District of Columbia. From its switching centers in Norfolk, Richmond and Washington DC, US LEC serves several areas of Virginia, including Chesapeake, Hampton, Newport News, Norfolk, Portsmouth, Suffolk, Virginia Beach, Williamsburg, Blacksburg, Charlottesville, Fredericksburg, Manassas, Northern Virginia, Petersburg (Tri-Cities area) and Roanoke. According to its web site, US LEC served approximately 3,500 mid-to-large sized business customers in the Northern Virginia and Washington D.C. area as of January 2005 and over 4,200 such customers by November 2005.[340] US LEC has at least 6 on-net buildings in the Commonwealth.

Q. PLEASE PROVIDE EXAMPLES OF HOW SPRINT SERVES ENTERPRISE CUSTOMERS IN VIRGINIA.

A. Recent examples of how Sprint is meeting the needs of enterprise customers in Virginia include:

- In early 2004, the Commonwealth of Virginia awarded Sprint a contract to deliver unique online education content to K-12 schools statewide via the company's Empowered Education(SM) Desktop solution. The Empowered Education Desktop, powered by LearningStation, combines Sprint's communications network with online delivery of a

[340] US LEC Press Releases, *US LEC Expands in Virginia Markets*, January 20, 2005 and *US LEC Adds to Virginia Coverage*, November 29, 2005, available at http://www.uslec.com/news.aspx?l=_Press%20Center&lFace=313 and http://www.uslec.com/news.aspx?l=_Press%20Center&lFace=355.

comprehensive listing of high-quality educational curriculum and learning tools (software and web sites) from a wide range of leading K-12 content providers.[341]

- In late 2002, Sprint and Bank of America announced a 10-year communications services agreement to help power new services for Bank of America's 28 million customers and create one of the most advanced, secure, high-speed data networks in the financial services field. Using Sprint's "lightwave" services, Bank of America will be able to integrate its existing networking backbone into one consolidated infrastructure. Bank of America will use Sprint's backbone network to transmit and access mission-critical data, such as checks, monthly statements and other data applications. The new network, which consists of the Sprint backbone and other telecommunications facilities, will link more than 4,400 banking centers, call centers and data-processing units nationwide, allowing Bank of America to provide its customers with seamless financial transactions at every point of contact. Sprint's optical services also will connect more than 12,000 Bank of America ATMs around the country, enabling Bank of America to offer vivid color, sound and speed. Bank of America has many Banking Centers and ATMs throughout Virginia.[342]

Q. PLEASE PROVIDE EXAMPLES OF HOW GLOBAL CROSSING SERVES ENTERPRISE CUSTOMERS IN VIRGINIA.

A. Recent examples of how Global Crossing meets the needs of enterprise customers in Virginia include:

- In May 2005, Global Crossing reached a new agreement with Loral Skynet, under which Loral Skynet will leverage Global Crossing's Fast-Track services to more easily reach locations outside its satellite network, delivering converged IP services to its global customer base. Using Global Crossing's iMPLS™ service, the two companies are interconnecting at Loral Skynet's terrestrial POPs in San Jose, California; Ashburn, Virginia; and Munich, Germany

[341] *See* Sprint Press Release, *Sprint Awarded Contract to Deliver Unique Online Learning Tool to Virginia Public Schools*, January 22, 2004.

[342] *See* Sprint Press Release, *Sprint and Bank of America Sign Communications Network Agreement*, October 16, 2002 and Bank of America, *Locations*, available at http://bankofamerica.via.infonow.net/locator/atmbranch/.

using the highest level industry standard interconnection available. The network is then directly extended to multiple earth stations that provide satellite and terrestrial connectivity to Loral Skynet's customers in North America, Latin America, Asia, Europe, the Middle East and Africa. Loral Skynet is also leveraging Global Crossing's IP Transit service to provide customers with Internet connectivity, and is using Global Crossing's private line service for both resale and its own network infrastructure.[343]

- Global Crossing provides Nalco Company, the leading provider of integrated water treatment and process improvement services, with global managed IP VPN, Internet access and voice services. The companies are in discussion to add VoIP services in the near future. Nalco's IP traffic will be transported over Global Crossing's secure, privately owned and operated MPLS-based IP backbone, which is separate from the public Internet. This private platform enables Global Crossing to provide global multinationals with the security and performance they require. By selecting Global Crossing, Nalco was able to turn over its domestic wide area communications services, global IP VPN and managed services to a single vendor, greatly simplifying its management. Nalco expects to lower its costs by 31 percent as a result. In addition to the IP VPN, Global Crossing is providing Nalco with Dedicated Internet Access as well as switched and dedicated voice services in 80 domestic locations. In Virginia, Nalco has locations in Midlothian and Bristol.[344]

Q. PLEASE PROVIDE AN EXAMPLE OF HOW BROADWING SERVES ENTERPRISE CUSTOMERS IN VIRGINIA

A. Broadwing provides MultiConnect private line services to W.W. Grainger, Inc., a leading broad line supplier of facilities maintenance products throughout North America. Under the multi-year contract, Grainger is using Broadwing's high performance, protocol agnostic MultiConnect private line service to connect

[343] *See* Global Crossing Press Release, *Global Crossing To Provide Loral Skynet With Expanded Fast-Track Service Capabilities*, May 24, 2005.

[344] *See* Global Crossing Press Release, *Nalco Selects Global Crossing Managed IP VPN for Transition to a Converged Environment*, April 26, 2005 and Nalco, *Nalco Locations, North America, United States*, available at http://www.nalco.com/ASP/region/country.asp?region=NA&cname=US&lang=EN.

several hundred Grainger locations in North America via the Broadwing network. Broadwing provides Grainger with a secure, private and reliable Wide Area Network ("WAN") solution that delivers data and voice services to Grainger's 400 U.S. based branches. Grainger has eight locations in Virginia.[345]

E. Private Line Services Should Be Declared Competitive.

Q. PLEASE DESCRIBE THE PRIVATE LINE SERVICES THAT VERIZON SEEKS DECLARED COMPETITIVE.

A. The private line services Verizon seeks declared competitive are: DS-0 or below dedicated narrowband, point-to-point non-switched services, DS-1, and DS-3 and above digital services. The narrowband services are generally voice grade and below and include remote alarm circuits, low speed data and dedicated voice grade lines between two business locations. The digital services include high capacity (DS-1 and above) dedicated services.

Q. WHAT NETWORK COMPONENTS DO COMPETITORS USE TO PROVIDE PRIVATE LINE SERVICES?

A. Private line services consist of three basic components – local access (loops or circuits), interoffice transport and end user termination. Private line circuits fundamentally rely on the same underlying elements as switched services—except for the switch and interconnection to the PSTN. As a result, competitors that offer voice or other switched services can easily offer private line services. In fact, the barriers to entry for private line services are significantly lower than for switched services since competitors do not need to deploy any switching

[345] *See* Broadwing Press Release, *Broadwing Communications Signs Major Contract with Grainger*, January 11, 2005 and Grainger, *Find a Branch*, available at http://www.grainger.com/Grainger/wwg/branchSearchRender.shtml.

equipment. Additionally, competitors can use their own facilities, those of a third party wholesaler, or those of Verizon to offer private line services. Accordingly, evidence of competition for switched services is relevant to and reflects the presence of competitors for private line.

Q. HOW DO PRIVATE LINE SERVICES FIT IN THE MARKETPLACE?

A. Private line services are part of a portfolio of services that enterprise - and to some extent mass market - customers purchase to meet their communications needs. Competitors can use the same access and transport facilities for these services as they do to provide switched services. Moreover, competitors seek to serve their customers' entire demand for communications services both to capture and retain their customers. Thus, as described above in more detail, business service competitors typically market "packages" of services, which include long distance, data and Internet services with local exchange services, making private line and local exchange service components of telecommunications service in general.

Special access services require only access, transport, and termination facilities as well and are, as a result, the same as private line services. Thus, the competition that has occurred over the last decade to bypass ILEC carrier access has also benefited private line services. Many carriers invested billions of dollars to deploy their own fiber networks. These competitors—including IXCs—provide access and private line services as part of their service bundle, over the same facilities they use to provide local services. This multiple use of the same facilities allows competitors to avoid ILEC access charges, take

advantage of network economies of scale, and strengthen their relationships with their most lucrative customers by providing full service packages. Thus, they compete with Verizon by selling (and carrying) various types of traffic and circuits to (and from) end users as part of a full-service package.[346]

Q. WHAT IS THE SIGNIFICANCE OF THE FACT THAT PRIVATE LINE SERVICES ORDINARILY UTILIZE A SUBSET OF THE FACILITIES USED FOR SWITCHED LOCAL SERVICES AND BUNDLED SERVICES?

A. This is important because: (1) the widespread presence of local access and transmission facilities that many competitive carriers have deployed and are continuing to deploy, plus the availability of loop and dedicated transport UNEs, provide the means for vibrant competition for private line services as well as switched services; and (2) the competitive data on switched services coupled with additional information documenting that these competitors offer private line services show that competitors are presently providing private line services.

Q. DO COMPETITORS NECESSARILY COMPETE WITH VERIZON PRIVATE LINE SERVICES USING THE SAME NETWORK CONFIGURATIONS AS VERIZON?

A. No. Services historically provided using traditional voice and data private lines are now handled by fiber rings, VPNs and by Internet access – via cable modem and DSL. More specifically:

- Historically, ILECs have generally connected end users first to their local wire centers via voice-grade copper loops or subscriber line carrier circuits and then transported traffic to other local or tandem offices.

[346] To do so the smaller competitors may use a mix of their own facilities and resale of toll services.

- As discussed above, CLEC network architecture differs from the ILECs' historical networks. In fact, CLECs can piece together a private line circuit from any and all available options for access, transport, and termination. This could, and often does, include the use of their own fiber rings to transport traffic between central offices or major enterprise locations.

- CLECs also use DSL to provide private line services for business. Most retail-focused businesses need real-time credit card authorization, and CLECs can establish a VPN over their own facilities (including last mile UNE) to connect card readers in these retail stores to the underlying credit card provider or authorization center.

- There are numerous wholesale carriers who are in the business of simply giving private line competitors another option for the access, transport, or termination portion of a private line circuit.

Q. WHAT FACTORS FACILITATE THE ABILITY OF COMPETITORS TO ENTER AND EXPAND IN THE PRIVATE LINE MARKET?

A. As I mentioned in the Mass Market, Small Business, and Enterprise portions of my testimony, a number of technological developments have increased the availability of access, transport, and termination facilities, including:

- The widespread availability of cable modem service;

- The deployment of CLEC fiber between Verizon central offices and connecting large enterprises;

- The deployment of broadband wireless, such as Wi-Max and Wi-Fi;

- The deployment of point to point fixed wireless solutions, such as First Avenue, Gigabeam, and others; and

- CLEC deployment of collocation facilities which allow for easy access to Verizon's UNEs.

Q. PLEASE DESCRIBE OTHER RELEVANT PRODUCTS THAT COMPETITORS OFFER THAT COMPETE WITH TRADITIONAL PRIVATE LINE SERVICES.

A. Competitors offer a number of different products that approximate the function of traditional private line circuits, including IP-VPN, Frame Relay, and ATM. As

discussed above, private line circuits are primarily used to provide connections between two or more separate office locations. Many of these other products are often more efficient at this task, oftentimes leveraging advances in IP technology and security and lower costs of various, often extant, data access technologies available to a end-user.

IP-VPN is the most recent private line replacement. It uses packet-based data routing to transmit data across a wide variety of underlying data connections, including DSL, T-1s, Frame Relays, ATMs and fiber links. These data packets can arrive at their destination in any order. An IP-VPN can be very secure, using IPsec, SSL, MPLS and other protocols, and is typically established through the exchange of security protocols between routers at either end of the link. With IP-VPN, end-users can obtain private line functionality as long as these customers have a broadband connection to the Internet.

Frame Relay is a private line replacement that uses packets, called "frames," to transmit data across a digital circuit at speeds often ranging from 128kbps to 1.5Mbps. Like IP-VPN, it runs over data links (typically T-1s), but its packets are prescribed to arrive in a specific order.

ATM is similar to Frame Relay, in that it is a packetized data transfer framework, but is significantly faster, relaying data at speeds up to 622Mbps.

Q. PLEASE SUMMARIZE THE EVIDENCE SHOWING THAT COMPETITION IS PRESENT FOR PRIVATE LINE SERVICES.

A. Competitors are selling or have the ability to provide all forms of switched and non-switched (private line or special access) business local exchange service:

- Customers have already switched to competitive facilities-based switched offerings in wire centers that account for **[BEGIN CONFIDENTIAL]** **[END CONFIDENTIAL]** percent of Verizon's private lines capacity. As explained above, this is noteworthy because if competitors can provide dial tone lines—which include loops and switching—and they can provide interoffice transport, then they can provide private line services on the same facilities.

- Public data—i.e., competitors' tariffs and marketing materials—show that the following carriers have private line offerings in Virginia: AllTel, AT&T, Business Telecom, Cavalier, Cox Communications, CTC Communications, Info Highway, Level 3, MetTel, NTELOS, PaeTec, Qwest, Sprint, TelCove, Winstar, USLEC, XO, and Xspedius.

- Competitors offer competitive alternatives to the Verizon services at issue here; and

- Competitors have extensive facilities capable of providing private line services in wire centers that account for the vast majority of demand for private line.

Q. HOW MANY COMPETITORS OFFER PRIVATE LINE SERVICES OR SERVICES THAT FULFILL THE SAME FUNCTIONS?

A. At least 14 companies provide private line or competing services, according to Competitive Carrier Report 2006, tariff filings and/or company statements. Of these companies:

- 7 have fiber or other facilities in Virginia;

- 11 provide facilities-based switched services;

- 15 providers of switched voice services are collocated in Verizon VA's central offices;

- 8 resell Verizon private line services. [347]

[347] New Paradigm Resources Group, Competitive Carrier Report 2006.

Q. PLEASE DESCRIBE, IN DETAIL, SOME OF THESE COMPETITORS.

A. Following is detailed data on seven of the companies that offer private line services:

- **AboveNet**[348]

AboveNet, Inc. provides fiber connectivity for businesses with an expansive network that covers most major domestic markets (New York/New Jersey Metro Area, Chicago, Philadelphia, Washington DC/Northern VA, San Francisco/San Jose, Seattle, Portland, Phoenix, Los Angeles, Houston, Dallas, Boston, Baltimore, Atlanta) and some international markets, as well (UK, Japan). AboveNet touts its extensive network as a major advantage over local providers.

AboveNet offers Metro Access Networks (MAN), Wide Area Networks (WAN), and Managed Services which include: WDM Wavelength Services, Metro Ethernet, WAN Ethernet, IP Transit, Dark Fiber, Hosting, and Data Centers. The company has a focus on large enterprises, claiming 5 of the top 10 US banks as customers.

AboveNet has 1.5 million fiber miles deployed globally. It receives investment funds from Craig McCaw, through Fiber, LLP, Kluge Trust, and Franklin Templeton, has 444 employees, and is headquartered in White Plains, NY.

AboveNet launched dcXchange on May 16, 2006,

[348] *See* http://abovenet.com/about/AboveNetFactSheet.pdf and http://abovenet.com/about/index.html.

> a data center to data center service delivering high performance connections over a dedicated DWDM core network, between prime locations in the Washington, D.C. & Northern Virginia market.[349]

dcXchange will provide virtualized collocation services to carriers, first in the DC metro market, with other "follow-on" markets to-be-announced.

- **at&t**[350]

at&t offers lit transport services and metro Ethernet throughout its 13 state LEC footprint, nationally, and internationally, and its products include SONET and metro DWDM. It sells services to enterprises, carriers and wireless and cable operators.

at&t touts having the most comprehensive set of capabilities in the industry, an award-winning network connecting to more than 238 countries and territories, as well as more than 400 correspondents and suppliers worldwide, and experienced operational support with hundreds of professionals dedicated to the wholesale market. It also has at&t Labs as its innovation arm, which helps it with "the development of advanced new services for carriers."

at&t is now the United States' largest telecom company, with 2005 gross revenues of $66.02 billion (pro forma), 186,560 employees (as of 3/31/06), 44,000 points of presence in 149 countries, and 48.8 million access lines with

[349] *See* http://abovenet.com/news/pr060516.html.

[350] *See* http://www.business.att.com/ver_overview.jsp?repoid=Vertical&repoitem=w_carriers&segment=whole and http://www.business.att.com/verticals.jsp?repoid=Vertical&segment=whole.

7.4 million DSL lines domestically. It is the world's largest directory publisher, with 110 million directories a year delivered. Its network is expansive and robust, with a global backbone that includes:

- "More than 1,500 managed MPLS nodes providing services in 127 countries
- at&t companies manage more than 112,000 MPLS ports for customers.
- at&t network includes 30 data centers across the globe.
- at&t global network includes 523,000 worldwide route miles."[351]

- **Cavalier Telephone**[352]

Cavalier Telephone is a CLEC headquartered in Richmond, Virginia and operating in Delaware, Hampton Roads, Maryland, New Jersey, Northern Virginia, Richmond, Pennsylvania, and Washington, D.C. Cavalier serves business, government, and residential customers and has invested over $215 million in its telecommunications network. It touts the savings that it can pass on to its customers by owning its own network and bypassing the ILEC.

In addition to retail service for both business and government organizations, Cavalier offers five wholesale services, including private line, private OC-48 and GigE rings, metro dark fiber rings, internet, and data center collocations.

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[351] *See* http://att.sbc.com/gen/investor-relations?pid=5711. Note: statistics reflect merger of AT&T and SBC, but not Bell South.

[352] *See* http://www.cavtel.com/business/index.shtml, (http://www.cavtel.com/business/government_solutions.shtml, http://www.cavtel.com/wholesale/index.shtml and http://www.cavtel.com/company/press/Cavalier_Press_Kit.pdf (all sites accessed December 6, 2006).

Cavalier acquired Elantic Networks, Inc. (formerly Dominion Telecom) in January 2006, which added significant amounts of fiber in Virginia. Dominion built its southern VA fiber network through a 20 year IRU with "a company that did not wish to be identified" in 2001.[353]

Cavalier's 2005 Net Revenue was $290 million, with an EBITDA of $56 million. Its total capital was $215 million. It currently provides over 330,000 access lines with local service.

Prior to the Elantic acquisition, Cavalier bought three other companies of note: Conectiv Communications in November 2001, net2000 Communications in January 2002, and ATG Communications in April 2002. Cavalier's four acquisitions (inclusive of Elantic) added over $1.6 billion in assets.

- **Level 3**[354]

Level 3 is an international communications and information services company headquartered in Broomfield, CO, and manages over 23,000 intercity route miles of fiber network, including North American and European operations as well as a trans-Atlantic fiber optic cable.

Its services include Internet access services, managed modem dial-up services, broadband transport, IP-centric voice services, private packet-

[353] *See* http://www.findarticles.com/p/articles/mi_m0IGK/is_6_15/ai_76813609.

[354] *See* http://www.level3.com/576.html, http://news.earthweb.com/bus-news/article.php/3602826, http://www.level3.com/press/7151.html, http://www.level3.com/press/2011.html and http://finance.google.com/finance?q=lvlt.

switched services, DSL aggregation, collocation and both metro and intercity dark fiber. Level 3 is following an acquisitive growth model, having bought WilTel's fiber optic network in 2005, Progressive Telecomm's fiber optic connections in the Southeastern US in March 2006, ICG Communications in April, and it announced a definitive agreement to purchase TelCove for $1.2 billion in stocks, cash and debt on May 1.

Level 3 claims the world's largest telecom carriers, the 10 largest U.S. Internet Service Providers, and the 10 largest European telecom carriers as customers.

Level 3 enjoyed revenues of $3.61 billion in 2005 ($1.3 billion for 1Q06), with gross profit of $1.3 billion ($0.4 billion for 1Q06) and net income of -$0.6 billion (-$0.1 for 1Q06). It has 4,800 employees.

- **PPL Telecom**[355]

With the 2003 purchase of Cambrian Communications, PPL Telecom (a wholly-owned subsidiary of PPL Corporation) extended its New York-to-DC network into Northern Virginia. It owns 2,500 route miles in total, with 1,500 regional transport miles and 1,000 metro route miles in 15 metro areas in total. PPL enjoys deep metro fiber penetration, with fiber passing within half a mile of over 100,000 business locations.

[355] *See* http://www.ppltelcom.com/thenetwork.html, http://www.isp-planet.com/resources/backbones/ppl.html, http://www.wave-report.com/other-html-files/citipowerline3.htm, http://www.xchangemag.com/articles/131sec3a.html, http://www.nysb.uscourts.gov/opinions/ajg/101099_40_opinion.pdf and http://www.ppltelcom.com/images/maps/dc_nvirginia.jpg.

With a network based on DWDM and SONET rings, the company offers private line from T1 to OC-192, Ethernet from 10 Mbps to 1 Gbps, IP Services (Dedicated Internet Access), and Wavelengths at 1G, 2.5G and 10G speeds, as well as collocation services.

As a wholly owned subsidiary of PPL Corp, PPL Telecom does not report financial information.

PPL's DC / Northern Virginia metro loop extends from DC westward along Route 66 until I-495, where it heads southwest to Manassas, before looping back north to Chantilly and on to Sterling, where it turns southeast past Reston, toward Falls Church and back to Washington.

- **Qwest**[356]

Along with Verizon and the newly merged at&t and BellSouth, Qwest is one of three remaining RBOCs.

Qwest's network runs on an OC-192 backbone and is national in scope, with Access POPs in over 30 states and DC, though it only has one POP in Virginia (Richmond). It offers networking ports in speeds ranging from 56 Kilobits per second (Kbps) to 2.4 Gigabits per second (Gbps) and uses MPLS fast re-route in lieu of SONET.

[356] *See* http://www.qwest.com/about/qwest/network/, http://www.qwest.com/about/qwest/network/imgs/QST611_iQ_NetMap_R3_large.gif, http://finance.google.com/finance?q=Q and http://www.investor.reuters.wallst.com/stocks/company-profile.asp?rpc=66&ticker=Q.

Qwest provides a full range of services to customers, both enterprises and carriers on retail and wholesale bases, including access, transport, voice and data, both in and out of region. Out of region, it operates approximately 138,000 fiber miles, allowing Qwest to provide customers with end-to-end connectivity to multiple locations throughout the country in metro markets.

Qwest's 2005 revenues were $13.9 billion with a gross profit of $8.0 billion and a net profit of -$0.8 billion. It has nearly $21.5 billion in assets and employees nearly 40,000 people.

On May 15, 2006, Qwest announced that it would acquire OnFiber for $107 million.

- **XO Communications**[357]

XO Communications brands themselves as an "NLEC" – a National Local Exchange Carrier offering nationwide communication solutions exclusively for businesses, agents and carriers. It has a national internet backbone that serves 75 metro markets with 6,700 metro route miles of fiber that connect to 953 ILEC end-offices.

XO's network includes 3,000+ on-network buildings, secure data center and 24x7 NOC, over 300 DSL access points, over 100 Tier One peering POPs, 1.16 metro fiber miles in 40 cities, 16,000 long-haul route miles of fiber, an OC-192 backbone, 34 Nortel DMS-500 switches, Sonus Network

[357] *See* http://xo.com/index.php, http://xo.com/about/network/details.html, http://xo.com/about/ourstory/networkassets.html and http://finance.google.com/finance?cid=661609.

softswitches and fixed wireless licenses cover 95% of the top US business markets.

It offers services in three primary categories – converged voice and data, DIA and web hosting.

XO saw 2005 revenues of $1,434 million ($350 million 1Q06), gross profit of $846 million ($195 million 1Q06) and a net loss of $147 million ($44 million 1Q06). It has approximately 5,000 employees.

Q. WHAT EVIDENCE OF PRIVATE LINE COMPETITION HAVE YOU GATHERED FROM PUBLIC SOURCES?

A. Based on our analysis of tariffs[358] for various private line services and of competitors' marketing materials we find that:

- Competitors offer a host of voice grade (i.e., DS-0) and high speed private line services ranging from DS-1 to DS-3 and higher.
- Competitors offer voice-grade private lines comparable to the point-to-point metallic, voice, audio and data services that Verizon is asking to be reclassified including digital DS-0 private line services, which support the same applications that voice-grade private lines support when analog-digital converters are added at the terminals.
- Competitors offer DS-1 services including full and fractional multi-use voice and data T-1 service.
- Competitors offer DS-3 services and higher speeds such as OC-3, OC-12, and OC-48 using SONET ring technology.

[358] Competitors with intrastate tariffs in Virginia: AllTel, AT&T, Business Telecom, Cavalier, Cox Communications, CTC Communications, Info Highway, Level 3, MetTel, NTELOS, PaeTec, Qwest, Sprint, TelCove, Winstar, USLEC, XO, and Xspedius.

Q. WHAT FACILITIES DO COMPETITORS HAVE IN PLACE TO COMPETE TO SELL PRIVATE LINE SERVICES?

A. To understand this, it is useful to explore the geographic distribution of Verizon private line circuits. To do so, I have calculated the distribution of demand by wire center of the over 300 wire centers in Virginia. The distribution reveals that:

[BEGIN CONFIDENTIAL]

[END CONFIDENTIAL]

Q. PLEASE SUMMARIZE YOUR TESTIMONY REGARDING PRIVATE LINE SERVICES.

A. Carriers use the same networks they already have in place to provide switched services to provide private line services. At least 14 companies provide private line or competing services. Competitors offer a variety of private line services, ranging from sub-voice to SONET rings. Thus ease of market entry and existence of competitors has been addressed. The private line services provided by Verizon are concentrated in a relatively few number of Verizon wire centers. Competitors' facilities – fiber facilities available to provision private line services in competition with Verizon – are similarly situated. It's a reasonable inference, that wherever demand exists for Verizon private line services, competitors respond by deploying facilities enabling competitive alternatives.

[359] GeoTel MetroFiber database.

V. Verizon's Competitive Services Are Not Subsidized by Monopoly Services

Q. YOU TESTIFIED EARLIER THAT SECTION 56 REQUIRES THAT COMPETITIVE SERVICES PASS A CROSS-SUBSIDY TEST. PLEASE EXPLAIN THAT REQUIREMENT FURTHER.

A. Section 56 specifically requires a showing that "there is no cross-subsidization of competitive [mass market] services by ***monopoly*** services."[360] The services to be declared competitive satisfy the required showing. First, once Verizon's retail services are declared competitive, the question of cross-subsidization by monopoly services becomes largely academic. Today, the Commission considers all telecom services provided by CLECs and cable competitors to be competitive, and does not apply any cross-subsidy test to their services.[361] Similarly, no test should be required for Verizon in the future. Nonetheless, Verizon performed an analysis to show that the services to be declared competitive are not being subsidized in any event.

Q. PLEASE EXPLAIN THE CROSS-SUBSIDY ANALYSIS THAT VERIZON CONDUCTED.

A. Verizon gathered cost and revenue data pertaining to each of the services it seeks to have declared competitive. For a majority of the services, statewide average direct incremental costs were generated and compared to revenues. In circumstances where tariff rates are constant across different rate groups, cost-to-revenue ratios between the tariff rate and the statewide average direct

[360] Va. Code § 56-235.5(H) (emphasis added).

[361] Va. Code § 56-265.4:4 applies identical language to § 56-235.5(H) to CLECs.

incremental costs were derived. The ratios were then multiplied against total revenues to obtain total direct incremental costs.

In some instances, tariff rates vary across different rate groups. In these cases, weighted-average tariff rates were derived and compared to statewide average direct incremental costs, generating cost-to-revenue ratios. Again, the ratios were then multiplied against total revenues to obtain total direct incremental costs.

When weighted-average rates could not be developed, the lowest tariff rates or the implied tariff rates were used instead of simple averages. The lowest tariff rates were used to calculate the most conservative revenue-to-cost margins. Implied tariff rates were derived by taking total revenues and dividing by the total quantities, subject to the constraints of the highest and lowest tariff rates. The direct incremental costs were divided by the lowest tariff rate or the implied tariff rates to derive cost-to-revenue ratios. The ratios were then applied to total revenues to derive total direct incremental costs.

Finally, there were services for which direct incremental costs were not calculated because the service generated a very minimal amount of revenue and very detailed special studies would have been required to determine exact margins. In these situations, a conservative approach was taken by assuming that total direct incremental costs were equal to total revenues.

Q. WHAT WERE THE RESULTS OF THAT ANALYSIS?

A. Exhibit VA-24 presents the results of the cross-subsidy analysis. It shows that the services Verizon proposes to have reclassified as competitive are priced above their incremental costs and are therefore not being cross-subsidized by any other class of services.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.